

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 H05K1/16 H05B33/12		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 H05K H05B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, IBM-TDB		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 197 15 658 A (PHILIPS LEITERPLATTEN AT GMBH) 22 October 1998 (1998-10-22) column 5, line 2 - column 6, line 11; figures 1-6	1-51
Y	US 2002/039000 A1 (TAKEISHI TAKU ET AL) 4 April 2002 (2002-04-04) page 1, paragraph 4-14	1-51
Y	US 4 839 558 A (MIERZWINSKI EUGENE P) 13 June 1989 (1989-06-13) cited in the application column 2, line 39 - column 4, line 35; figures 2,3	1-51
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <span style="margin-left: 100px;"><input checked="" type="checkbox"/> Patent family members are listed in annex.</span>		
* Special categories of cited documents : <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>* &amp; * document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search  <div style="text-align: center; font-weight: bold;">20 December 2004</div>		Date of mailing of the international search report  <div style="text-align: center; font-weight: bold;">29/12/2004</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  <div style="text-align: center; font-weight: bold;">Debre, A</div>

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 854 662 A (HAGE GMBH & CO KG ; LEISING GUENTHER PROF DIPL ING (AT)) 22 July 1998 (1998-07-22) cited in the application column 4, line 17 - column 5, line 10; figures 2-4	1-51
A	US 4 594 282 A (KAWAGUCHI MASASHI ET AL) 10 June 1986 (1986-06-10) column 1, line 9 - column 2, line 68; figure 1	1,34

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